

DETAILED ACTION

Response to Amendment

1. In response to the Amendment received on December 30, 2009, the examiner has carefully considered the amendments. The examiner acknowledges the cancellation of claims 1-20 and 26-67, as well as, the addition of new claims 68-78. The addition of new claims 68-78 have generated a new prior art rejection, in which, claims 21-25 will also be rejected. Please find all rejections below.

Response to Arguments

2. The rejection of claims 54-58 under 35 USC 251 for an improper recapture of broadened claimed subject matter is withdrawn since claim 54-58 have been cancelled.

3. Regarding the arguments for the defective oath/declaration, the examiner still does not find the signature of invention Takashi Ukachi. Therefore the examiner will re-instate the rejection/objection for the now pending claims. Please find the rejection below.

Reissue Applications

4. The reissue oath/declaration filed with this application is defective (see 37 CFR 1.175 and MPEP § 1414) because of the following:

5. Claims 21-25 and 68-78 are rejected as being based upon a defective reissue oath/declaration under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175.

The nature of the defect(s) in oath/declaration is set forth in the discussion above in this Office action.

Claim Rejections - 35 USC § 102/ Claim Rejections - 35 USC § 103

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 21-25 and 68-78 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Okawa et al (JP10-158385).

9. Okawa et al sets forth a resin composition for forming optical solids and method of formation of said optical solid. Okawa et al set forth a resin composition which comprises an oxetane having one or more oxetanyl moieties having the general formula (I) found in [0014], wherein m is 1 to 4, another cationically polymerizable resin other than an oxetane, wherein epoxy resins are preferred, a cationic photoinitiators, a radically polymerizable compound having one or more unsaturated double bonds, and a free radical photoinitiator—see [0014], [0028], [0030], [0043], [0051], and [0065]. The formation of said optical solid can be forming a layer of resin composition and hardening said layer and repeating this process until a/the desired three dimensional solid optical part is formed— [0001] and [0002]. Additionally, Okawa et al sets forth the resin composition can optionally comprise an organic compound having two or more hydroxyl groups in the molecule to improve the impact strength, wherein polyethers that are reaction products of alkylene oxides, such as propylene oxide, with polyhydric alcohols, such as glycerin can be found—see [0076] and [0078]. Other optional additives can be added according to the teaching, such as thermoplastic resins, bulking agents, as well as, colorants (the examiner is interpreting this to mean both pigments and dyes since they both are colorants)—see [0081], [0084], [0087], and [0088]. Per examples, Okawa et al sets forth resin compositions comprising an oxetane compound, an epoxy compound and a cationic

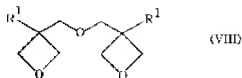
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photoinitiator used in a CAD data system for 3-D modeling laminated in a 0.1-mm pitch, wherein the accuracy was 0.022% in the radical direction and 0.051% in the height direction. While not expressly setting forth the shape of the above defined model, the examiner deems that this accuracy should be obtained with any shape model made from said resin composition. Thus, claims 68, 70 and 71-73 are found in the reference.

10. Regarding claims 74-78, the basic composition is set forth in the above paragraph. Okawa et al sets forth as useable epoxy resins epoxidized soybean oil, epoxidized stearic acid, epoxy butyl stearate, epoxidized linseed oil and epoxidized polybutadiene—see [0046, end of the paragraph]. These resins are of the type obtained by the process in claims 74 and 76 section (a). Per section [0062], Okawa et al sets forth the use of pentaerythritol tetra (meth)acrylate as a usable free radically polymerizable monomer—see end of paragraph in [0062]. One preferred type of cationic photoinitiators are aromatic sulfonium salt initiators, wherein bis (4-diphenylsulfonio) phenyl sulfide bis hexafluoroanionitmonate is disclosed in section [0040] and in the examples 1, 4 and 6-7. Free radical photoinitiators, such as 1-hydroxycyclohexyl phenyl ketone are mentioned in section [0067], as well as, in examples 6 and 8-9. Okawa et al sets forth for the oxetane compound having general formula (I) (see [0014], when m is 1 (one) it is preferred R1 is an ethyl group and R2 is a hydrogen—see [0016]. Additionally, this compound is found in the examples in examples 1-3 and 5-6. Said composition can additionally comprise a colorant, such as a pigment and/or dye. Therefore it is deemed by the examiner that the compositions of claims 75-76 and 78 are read in and obtainable from the teachings of the reference. Additionally, it can be seen in the examples the epoxy compound can be added in amounts from 10 to up to 75 parts by weight based on 100 parts by weight of the composition. Thus claim 68 is obvious in view of the teachings of the reference.

11. Regarding claims 21 and 68, per examples 1 and 2-8, Okawa et al sets forth a resin composition used a photofabrication process for obtaining 3-D objects comprising an oxetane compound having at least two oxetane moieties, an epoxy compound and a cationic photoinitiator. Regarding claims 25 and 68, examples 11-12 set forth resin compositions comprising an oxetane compound having 50 oxetanyl moieties (see oxetane 4 in [0097]), an epoxy resin and a cationic photoinitiator for photofabrication. Okawa et al sets forth when compounds having 2 oxetane moieties in the molecule a compound of formula (VIII) is

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preferred—see [0024], wherein formula (VIII) is , wherein the definitions for R¹ can be found in [0015] and [00017] and is preferably a lower alkyl groups such as ethyl [0016]. Thus claims 22-24 and 68 can be found in the teachings of the reference.

12. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Japanese document 07-062082 to Sasaki et al discloses similar compositions without the free radically polymerizable compounds. Japan document 07-053711 to Sasaki et al discloses a cationic photopolymerizable composition that contains oxetanes and epoxides. Japan document) without the addition of polyfunctional vinyl monomers. The differences between these applications to Sasaki et al and this application is Sasaki et al does not expressly disclose the use of hexa- and penta-functional acrylate monomers nor using said compositions for photofabrication methods.

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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McClendon whose telephone number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sanza L McClendon/

Primary Examiner

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